M E M O R A N D U M

DATE: February 3, 2011

TO: Policy Committee

FROM: W. Scott Whyte, Senior Landscape Planner

SUBJECT: Development Standards – Landscaping/Requirements for Parking Lots

_____

I. **Parking Lot Landscaping**

Parking lot landscape requirements are found in section 24-97 of the zoning ordinance. In general, the ordinance contains the following provisions pertaining to parking lot landscaping:

- Preservation of trees - Existing trees are to be preserved when possible to meet the intent and satisfy the requirements of the section.
- Area and planting requirements - 10% of parking surface is required to be landscape areas; quantity (1 tree and 2 shrubs for every 5 parking spaces); size and mixture requirements of plants; and 75' minimum spacing for trees.
- Parking lots are to be screened from rights-of-way.
- Bus parking is to meet special quantity and size and mixture requirements.

Evaluation of the landscaping ordinance was included in the scope of work item identified as Development Standards. It has been the experience of the landscape planner that parking lot landscape is the most problematic of all the landscape requirements as it is an area of the ordinance that applicants struggle with interpreting and implementing, and an area where the finished product has the highest percentage of failure. Staff examined the requirements for parking lot design and parking lot tree requirements, distribution of plant materials in parking lots, excavation of parking lot islands, and the 35% evergreen tree requirement for clarity, intent, and quality control.

II Discussion Items
A .Parking lot design and parking lot tree requirements
1. Description of issue/problem
   - *There is a perceived conflict between ordinance section 24-57(a) for parking lot design and section 24-97(b)(4) for parking lot landscape design. Landscape islands are required a minimum of every 150' by the parking lot design standards, while trees are required a minimum of every 75' by parking lot landscape standards. Applicants frequently question what areas are considered within the perimeter of the parking lot and feel that a 75' spacing of trees is too close. They feel that the requirement is too stringent and that a potential solution of staggering the trees is often difficult from a design standpoint. Taking into account a variety of factors, staff has routinely accepted modifications for parking islands spaced up to 90' apart.*
2. History/Background
   - *Section 24-97 appears to have been first put in the ordinance in its current form in 1990.*
   - *Changes throughout the 1990s required trees to be evenly distributed throughout the interior of the parking lot. Trees were required to be spaced no further than 75' apart and 1 tree and 2 shrubs were required for every 5 parking spaces. Parking lots were to be screened from adjacent right of ways with 36" high hedges.*

- *The most significant change was the amount of landscaping within the perimeter of the parking lot. The earlier requirements had a portion of the landscaping located in strips outside of the parking lot perimeter with the rest of the required landscape inside the perimeter. Current regulations for parking lot landscaping require all plant materials to be located and evenly distributed within the perimeter of the parking lot.*

3. Comprehensive Plan GSAs, public input, and PC and BOS direction
   - *Several GSAs throughout Population Needs, Parks and Recreation, Transportation and Community Character reference providing adequate parking and screening of the parking lots.*
   - *CC 3.7 encourages low visibility parking lots - Expect new developments to employ site and building design techniques that reduces their visual presence and scale. Design techniques include berms, buffers, landscaping, building designs that appear as collections of smaller buildings rather than a single large building, building colors and siting that cause large structures to blend in with the natural landscape, and low visibility parking locations.*
   - *T 4.1 encourages low visibility parking - Guide new developments in designing roadway and parking areas that reduce the visual impact of auto-related infrastructure, specifically in Community Character Areas.*
   - *Community Appearance Guide - has many references to landscaping within parking lots. It addresses the need for tree canopies to break up the asphalt and shade the parking area, to screen parking from adjacent properties, and to design smaller compartmentalized parking areas.*
   - *Toano Sub-area Study - recommends that parking lots be screened by buildings and landscaped berms.*
   - *Shaping Our Shores - has many references to providing adequate parking that blends into the existing landscape, the need to screen proposed parking and use grass pavers and LID (Low impact design) features within parking areas.*
   - *New Town Design Guidelines - contain many references to parking lot landscaping. The design principles were pattered after some of the smaller parking lots in Colonial Williamsburg, characterized with a shade tree canopy and separated from other areas through landscaping and building placement.*
   - *Five Forks Area Study - recommends that parking lots be well landscaped and placed behind buildings, while preserving as much existing vegetation as possible.*
   - *Public comment offered during the Zoning and Subdivision Ordinance Update process included input that the application of ordinance 24-97 (c) should be determined by the planning director or his designee. It was stated that the screening of parking lots is achieved through the right of way buffer requirements.*

4. Solutions and policy options
   - *To address the issues stated above, staff proposes revising sections 24-57 and 24-97:*
   a. *Revise section 24-57 by requiring parking lot islands every 90' instead of every 150', and revise section 24-97 by deleting the shade tree every 75' rule. This would increase the number of islands (and associated landscaping) required, but reduce the overall number of trees required, resulting in no perceived conflict between the two ordinances. This would correspond better to amounts that applicants have been comfortable providing in practice. See the attached typical parking lot plan for an example of what the proposed changes would look like.*

5. Staff recommendation
   - *Staff recommends the above changes to the parking lot design and parking lot tree requirements to clarify the ordinance while still achieving the overall intent.*

B. Distribution of plant materials in parking lots

1. Description of issue/problem
   - *Under the current regulations, applicants typically propose locating most of the parking lot plant materials along drive aisles and in perimeter beds, leaving the rest of the interior of the parking lot bare of vegetation. While this practice creates attractive drive isles and makes the parking lot appear to be vegetated from outside views, it does not help with the original intent of the ordinance, which was to provide canopies and greenery through out the interior of the parking lot to reduce heat and glare and to break up the large expanses of asphalt. This would be a minimum requirement and applicants that prefer ornamental drive isles can simply exceed the minimum requirement.*
2. History/Background
   - *See A above*
3. Comprehensive Plans GSAs, public input, and PC and BOS direction
   - *See A above*
4. Solutions and policy options
   - *To address the issues stated above, staff proposes revising section 24-97 in the following way:*
     a. *Revise section 24-97 to substitute the 1 tree and 2 shrubs for every 5 parking spaces with a quantitative requirement for every island and half island, such as 2 trees and 6 shrubs for every island and 1 tree and 3 shrubs for every half island. This would make the requirement more straight forward, while still requiring approximately the same amount of landscaping in the parking lots as routinely proposed by applicants now. It would also ensure that plant materials are evenly spaced throughout the interior of the parking lot.*
     b. *An additional planting at each corner of the parking lot should also be required to simulate islands at the ends of parking bays.*
   - *Simple quantitative requirements like these would eliminate the varying interpretations that staff receives from applicants and ensure that plant materials are distributed through out the interior of the parking lots.*
5. Staff recommendation
   - *Staff recommends the above changes to the quantity requirements for parking lot landscaping to clarify the ordinance, achieve the intent of the ordinance, and improve final results for distribution of plant material.*

C. Excavation of parking lot islands

1. Description of issue/ problem
   - *Parking lot islands are often improperly excavated and not filled with quality topsoil, resulting in unhealthy and unsustainable landscaping. Many times the island has poor quality soil for the first 6" followed by a sub layer of crush and run (a finely crushed gravel), followed by a layer of dense clay. This situation results in a poorly drained and unfertile environment for the trees to grow. Creating a set of island excavation and back-fill requirements could correct this situation.*
2. History/Background
   - *See A above*
3. Comprehensive Plans GSAs, public input, and PC and BOS direction
   - *See A above*
4. Solutions and policy options
   - *Staff proposes adding a new section to the parking lot landscaping section of the landscape ordinance to require proper excavation of the parking lot islands and to require quality top soil for backfilling the islands and peninsulas.*
   - *An illustration would be a helpful tool to explain this requirement in the zoning ordinance.*

- *Inspection of the parking lot islands while they are being excavated could become one of the items that our environmental inspectors review in the field during construction.*

5. Staff recommendation
- *Staff recommends the above changes to the parking lot landscape section of the ordinance to improve final results.*

D. 35% evergreen tree requirement

1. Description of issue/ problem
- *Trees within the perimeter of the parking lot are required to be at least 35% evergreen. This part of the ordinance was increased from 25% in 1999. The intent was to give the parking lots some greenery throughout the winter months. However, landscape designers have commented that the 35% makes it awkward to design a symmetrical parking lot with this percentage of evergreens. They feel that 25% is more design-friendly for large parking lots and that the evergreen rule should not apply to smaller parking lots.*

2. History/Background
- *See A above*

3. Comprehensive Plans GSAs, public input, and PC and BOS direction
- *See A above*

4. Solutions and policy options
- *The evergreen tree requirement is intended to break up large areas of asphalt with some year-round greenery; however, this requirement becomes awkward when trying to design small parking areas that do not have as much need for the year round greenery. Staff recommends revising the 35% evergreen rule in section 24-97(b) (3) to 25% and only for parking lots over 99 spaces that contain more than two rows of parking. The 25% requirement is easier to incorporate into square or rectangular shaped parking areas, and the evergreen rule is not needed for small parking areas. The sample parking lot drawing contains the minimum number of spaces that would require evergreens. Staff believes that this size parking area is of an appropriate size to establish an evergreen requirement.*

5. Staff recommendation
- *Staff recommends the above changes to the mixture requirements of the parking lot landscape section of the ordinance to clarify and simplify the ordinance, while still achieving the intent of the ordinance.*

III. **Conclusion**

Staff has identified a number of problem areas with the parking lot landscaping section of the ordinance, both in interpretation and in final results. The proposed changes are designed to clarify and simplify the existing ordinance by making the parking lot design requirements and the parking lot landscape requirements concur with one another and by allowing less room for different interpretations. The changes would be slightly less stringent than what the County requires now, but still effective and more in line with current practices. Applicants that wish to give special treatment to entrances aisles or pedestrian amenities may go beyond these minimum landscape standards. Staff recommends the Policy Committee support these changes to the ordinance that pertains to parking lot landscape to provide more clarification and better results.

Attachments:

1. Parking Lot Landscaping